

research should explore why these differences in care provision exist, and the impact on patients' quality of life such as symptom management, advance directive completion, and caregiver support. Additional investigation into the decline of palliative care consults is also warranted.

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Outcomes of Patients Receiving Inotropes for Palliative Indication versus as a Bridge to Surgical Therapy

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Introduction: Use of long-term, continuous intravenous inotropic support (CIIS) has increased in prevalence over the past decade. Published evidence indicates that CIIS improves NYHA functional class but does not impact survival. Robust data regarding clinical outcomes of patients receiving inotropic support for palliative indication (i.e. not being considered for mechanical circulatory support (MCS) or orthotopic heart transplantation (OHT)) are lacking. **Objective:** Describe the outcomes of patients receiving CIIS for palliative indication versus as a bridge to surgical therapy, including length of use, mortality, and referral to palliative care and/or hospice. **Methods:** With institutional review board approval, we conducted a retrospective cohort study examining outcomes in patients discharged from an urban, tertiary-care, academic hospital on CIIS between 2010 and 2016. Patients were stratified by indication for initiation of inotropic support. Electronic health record review was conducted to abstract patient demographics, clinical characteristics, duration of inotrope use, reason for CIIS discontinuation, and composite end-point of hospice referral or death at the end of the study period. **Results:** We identified 380 patients (24.7% female; 66% African American) who were discharged on CIIS during the study period. Average age of the study participants was 59.2 ± 14.5 years. Thirty-two percent of patients had ischemic cardiomyopathy, 66% had nonischemic cardiomyopathy, 4% had mixed-etiology cardiomyopathy. All patients had stage D HFREF, with mean ejection fraction of 19.4% ± 4.5%. Of these, 129 patients (34%) were receiving CIIS for palliative indication, and the remaining 251 patients (66%) as a bridge to definitive surgical therapy (MCS or OHT). Of patients receiving CIIS for palliative indication, the mean length of use was 202 ± 214 days, with a composite end-point of hospice referral or death occurring in n=122 (95%). The majority of patients receiving inotropes for palliative indication n=92 (71%) received a palliative care consult and were referred to hospice n=79 (61%). Of patients receiving CIIS as a bridge to surgical therapy, 151 (62.5%) received MCS/OHT and 51 (20.3%) died prior to receiving surgical therapy, with lower rates of referral to palliative care (n=24 or 47%) and hospice (n=13 or 25%). **Conclusions:** In this large, racially diverse sample of patients, those receiving CIIS for palliative indication lived on average for about 6.5 months, though with a large variation between patients. Patients who are initiated on CIIS as bridge to surgical therapy have a high mortality while awaiting surgical therapy, but are less likely to receive palliative care and hospice services.

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Does Physical Therapy Matter among Heart Transplant Recipients While on Intra-Aortic Balloon Pumps in the Pretransplant Period?

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Objectives: Femoral insertion has a limitation regarding patient mobility thus prolonged bedrest and immobilization of the insertion site until transplantation. Prolonged femoral IABP support increases the risk for profound deconditioning, increases time to functional recovery and increases the risk of comorbidities. The objective was to assess the effectiveness of a tilting PT treatment protocol for patients who are awaiting heart transplantation as status IA on IABP support via the femoral artery. The tilting protocol consists of supervised PT while the patient's bed is in a progressively increased angle using a VitalGo bed (VitalGo Systems Ltd., Fort Lauderdale, FL). We hypothesized that the benefits of this tilting program would promote weight-bearing for improved lower extremity strength and assist with acclimation to the upright position, thus decreasing the effects of orthostatic intolerance. The benefits should translate to a higher likelihood to be discharged to home as opposed to rehab and shorter length-of-stay [LOS] post-transplant. **Methods:** We retrospectively reviewed charts from a single heart and vascular center over five years (January 2013-January 2018). Included patients were adults (>18) who were admitted with a cardiogenic shock or advanced heart failure diagnosis, placed on femoral IABP >15 days, had a transplant status of IA, and received a PT consult. We compared outcomes (discharge location, LOS) from patients who participated in little to no (standard) physical therapy versus those who performed the tilting PT treatment protocol using a standard t-test. 12 patients met inclusion criteria. Six patients (4 men, 2 women, mean age 54.5 ± 13.9 years) received the tilting PT treatment protocol using VitalGo beds. Six patients (5 men, 1 woman, mean age 47.1 ± 10.9 years) received standard physical therapy and served as the control group. **Results:** In the tilting protocol group, 4 patients were discharged home and 2 were discharged to rehab. In the control group, 3 were discharged home and 3 were discharged to rehab. The average post-transplant LOS was significantly different; the tilting protocol group had an average LOS of 15.1 ±

9.26 days compared to an average of 29.8 ± 9.76 days in the control group (p=0.03). **Conclusions:** While discharge result differences could not be established between the two groups, LOS post-transplant was significantly improved when the tilting PT program was implemented. Further, all supervised PT in patients (regardless of bed position) with femoral insertion of IABP did not result in access site complications, thrombosis or arrhythmias. Further study with a larger patient population is needed to confirm these findings and to investigate the impact of the tilting PT protocol on quality of life. Confirmation of this data would mean improved outcomes for patients along with decreased medical costs of recovery.

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Patients Accept Mortality Risk for Improvements in Physical Functioning in Secondary Mitral Regurgitation

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Introduction: Quantitative data on patients' willingness to accept benefit-risk trade-offs with new medical procedures can provide useful information to regulators and clinicians. We adhered to 2016 Guidance from the FDA's Center for Drugs and Radiological Health to generate evidence on patient preferences relevant to potential risks and benefits with transcatheter mitral-valve repair versus medical therapy for patients with heart failure (HF) and secondary mitral regurgitation. **Hypothesis:** We hypothesized that tolerance for procedure-associated risks would vary across different levels of improvement in physical functioning. **Methods:** We designed a discrete-choice experiment to quantify patients' tolerance for procedure-associated increases in 30-day mortality or serious bleeding risks to achieve improvements in physical functioning or reductions in HF hospitalizations. After describing the procedure, risks and outcomes, respondents were asked to choose their preferred option among two experimentally-designed procedure profiles or a no-procedure profile for each of 8 choice questions. The survey was administered to two samples: HF patients treated at the Duke University Health System (DUHS) and an online panel of individuals reporting a HF diagnosis. We applied random-effects logit regression to model choices as a function of benefit and risk levels. **Results:** Respondents from DUHS (n=175) were slightly older (mean age 67 vs. 64 yrs, p=0.02) and more likely to be male (62% vs. 52%, p=0.06) than panel respondents (n=244). Across both samples, about 44% had symptoms consistent with NYHA class II, and 26.4% had symptoms consistent with NYHA class III or IV. Both samples revealed similar benefit-risk preferences. Approximately one-quarter (23.5%) chose procedure profiles offering a higher level of physical functioning across all 8 choice questions despite mortality and bleeding risks up to 7% or 10%. Amongst respondents who at least once chose a procedure profile offering a lower level of functioning, an improvement equivalent to moving from NYHA class IV to III was approximately six times more preferred than an improvement from NYHA class III to II. Estimated preference weights revealed that respondents would accept up to a 9.7 percentage-point (95% CI: 8.2%-13.3%) increase in risk of 30-day mortality with procedures that could improve functioning from NYHA class IV to III, but only up to 2.0% (95% CI: 1.4%-2.7%) for an improvement from NYHA class III to II. When controlling for improvements in functioning, the number of HF hospitalizations did not significantly impact respondents' choices. **Conclusions:** When faced with more severe versus less severe HF symptoms, patients are willing to tolerate greater risks to achieve improvements in physical functioning. These findings can be valuable to regulators. Nevertheless, variability in individual patient preferences underscores the importance of individualized shared decision-making.

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Pulmonary Hypertension in Cancer Patients Treated with Tyrosine Kinase Inhibitors

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Introduction: Cancer patients are at increased risk for pulmonary arterial hypertension (PAH) due to the disease itself, chemo- or radiation therapy, pulmonary embolism, or comorbidities. Several tyrosine kinase inhibitors (TKIs), which are increasingly used in the treatment of various cancers, have been linked with PAH. We aimed to describe the incidence of PAH triggered or worsened by tyrosine kinase inhibitors (TKIs) in patients with chronic myelogenous leukemia (CML). **Methods:** In this retrospective study, the medical records of all patients with CML who received first line treatment with imatinib, dasatinib, or nilotinib for ≥3 months at a large tertiary cancer center from 2000 to 2017 were reviewed. PAH was defined as a right ventricular systolic pressure >30 mmHg on transthoracic echocardiogram. Patients with PAH were categorized in 3 groups based on the TKI agent used. Descriptive statistics were used for analysis. **Results:** We identified 632 patients who were treated with TKIs for ≥3 months at our institution: 241 (38.1%) dasatinib, 105 (16.6%) nilotinib, 286 (45.3%) imatinib. New or